Health regionalization and federative cooperation in Brazil: the role of inter-municipal consortium

Abstract  This paper aims to investigate public inter-municipal health consortium operation in Brazil. To this end, a qualitative documentary analysis was conducted on the content of the agreements between the consortia and the Federal Government, available at the Transparency Portal of the Federal Government, from 1996 to 2016. The results cover two categories: agreements concluded in Brazil and the content of the agreements signed by an inter-municipal public consortium (CIS). The agreements signed were concentrated mainly in the Southern and Southeastern regions and aimed to carry out regional actions, thus contributing to health regionalization. However, challenges related to the process of cooperation and coordination between the health management bodies persist, mainly related to the improvement of linkages between the consortium and the regional health coordination and in-depth social control of these organizations.

Key words  Health consortium, Federalism, Regionalization, Voluntary transfers

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Introduction

Universal access to health services is a constitutional guarantee and is also a challenge shared by all entities of the federation – Federal Government, states, and municipalities. In recent decades, the consolidation of the right to health in Brazil occurred concurrently with the decentralization process of public policies. Many challenges have emerged over time, mainly due to the excessive fragmentation of the federative design underpinned today by 5,570 autonomous municipal entities, with 68% of these with less than 20 thousand inhabitants. Also, the literature indicates that most municipalities live in a situation of technical, financial and administrative deficiency, which consequently generates limited capacities to meet all the health demands of the population, especially concerning access to high technological density media services.

Given this reality and hardships of fully materializing the decentralization process in many municipalities, efforts were made by the Ministry of Health, mainly from the 1990s, to consolidate the process of regionalization of health policies. Government strategies focused on the consolidation of regionalized health system management bodies, such as the organization of Regional Interagency Coordination Offices, the setting of Health Regions, the consolidation of inter-municipal consortia and establishment of the Integrated Agreed Programming and public action organizational contracts.

Mendes et al. and Medeiros et al. understand that the regionalization process should be understood as a way of organizing health actions and services in a region to ensure comprehensive care for all users, enable the rationality of the expenses incurred, as well as resource streamlining and equity. Santos and Campos point out the need to regionalize health management within a complementary process to municipal decentralization. In this case, the main argument proposed by the authors refers to the existence of a considerable number of small municipalities that are unable to guarantee access to medium- and high-technological density services to the population. Thus, the regionalization of health demands and services would be a strategy to ensure the right to health for all citizens.

In this context, the emergence of inter-municipal health consortia (CIS) is now an alternative for the regional organization of demands and services, based on a proposal for inter-federative cooperation. The study by Silva et al. points out that, as they include several municipalities within the same region, health consortia organize the demand for specialized visits and medium- and high-complexity services, primarily benefiting smaller municipalities. Other studies emphasize how these organizations enable the economy in the procurement of medicines, how they contribute to access to medium-complexity services, which elements from consortia are facilitators in the process of developing actions involving intergovernmental cooperation, the level of satisfaction of health services’ users and, finally, the perception of the managers that underpin the consortium about environmental health problems.

Abrúcio et al. state that inter-municipal consortia are a cooperation mechanism that transcends the territorial and administrative boundaries of municipalities. However, the establishment of these organizations is an autonomous choice of the municipalities and does not necessarily have to obey the territorial division of the Health Region or the Regional Interagency Commission (CIR) of the respective state federative unit, nor even coincide with another political-institutional division of the territory previously defined. Thus, the autonomous organization of consortia can contribute to a fragmented health system, where efforts are not oriented towards the same goal, going against the strategies of coordination and cooperation of the health policy management spheres, highlighted by the literature on public policies. From a literature review on the Brazilian production on the subject, Flexa and Barbastefano indicate that health consortia enable municipalities to gain scale in the procurement of medicines. They collaborate with the rationality of processes and expenses and allow the realization of joint regional projects. According to the authors consulted, such requirements would not be feasible to be met in isolation by the municipalities.

The course of health policies has created, over time, a set of management spheres with decision-making and resource allocation power. With this large number of management structures and federated entities acting in the development of public policies, authors such as Abrúcio and Segatto and Grin and Abrúcio emphasize the importance of thinking strategies that guide the federative cooperation and coordination between these spheres. Without building action strategies in this regard, the work carried out in isolation by such structures and levels of government would tend to produce predatory behaviors between the parties, cost overruns, overlapping activities, care
gaps within a territory, and also competition for resources. Therefore, articulating management spheres around a regional health agreement has been a challenge for public health policies.

Thus, this study aims to investigate how inter-municipal public health consortia operate in Brazil from theories that address the process of health regionalization\textsuperscript{10-12,22} and interfederative cooperation\textsuperscript{25-27}. To this end, agreements between consortia from all over Brazil and the Federal Government during the period 1996-2016 will be analyzed. The analytical approach used is justified because studies on health consortia (CIS) are “case studies”\textsuperscript{28}, requiring a more comprehensive analysis on the subject. Therefore, this study intends to increase the understanding of these structures from a national focus.

**Methodology**

This paper was developed under the Ph.D. in Sociology of the Federal University of Rio Grande do Sul (UFRGS). This is a documentary research whose sources are available in public archives. Research integrity aspects were observed and respected; that is, this publication assumes the veracity and reliability of the data shown.

The study can be characterized as qualitative research with documentary data collection\textsuperscript{29}. This technique aims to understand the information contained in the original documents through systematization and categorization procedures\textsuperscript{30}. Thus, in September 2017, the agreements entered into between the Federal Government and the Brazilian public consortiums, available on the Federal Government Resources Transparency Portal, from 1996 to 2016, were accessed. After data collection, the material was organized in a spreadsheet, and the content of the proposals was examined, paying attention to the objectives presented by the consortia for the signing of the respective agreements.

In total, 384 agreements were concluded between the Federal Government and public consortia in the 1996-2016 period. Of these, 122 focused health, which were of interest to this research. The contents of the collected documents that underpinned the agreements signed were analyzed from the methods proposed by Bardin\textsuperscript{30}, which highlights the linguistic materiality of the text. This type of analysis attempts to understand the thinking of the subjects involved in the process of interest, through the content expressed in the text, in a more transparent conception of language. The documents analyzed are critical parts of the resource transfer process, as they evidenced the objectives and justifications for the conclusion of agreements between the consortia and the Federal Government.

Two categories of results were elaborated from the content analysis on the inter-municipal public consortia: 1) a general description of the agreements entered into in Brazil and 2) content of the agreements entered into by the inter-municipal public consortia (CIS). This last part will analyze the proposals submitted by the consortia in the light of the debate on health regionalization and public policy coordination.

**Results and discussion**

The Federal Government Transparency Portal\textsuperscript{31} provides details of the agreements established between the CIS and the Federal Government, such as purpose, dates, values, and cities that are covered by the consortium. This analysis allowed an in-depth understanding of the actions implemented by Brazilian health consortia.

**Overview of the agreements entered into in Brazil**

Data related to the development of the celebration of agreements between the Federal Government and inter-municipal consortia in Brazil in the 1996-2016 period, in general, and concerning the health sector, specifically, will be analyzed in this category.

Figure 1 shows the distribution of the number of agreements signed with inter-municipal consortia from all public policy areas over time. The number of agreements between consortia and the Federal Government increased significantly, mainly in 2010 and 2011. However, an irregular distribution over the historical series was observed.

Figure 2 shows the percentage distribution of agreements entered into between consortia from all public policy areas over time. The number of agreements between consortia and the Federal Government increased significantly, mainly in 2010 and 2011. However, an irregular distribution over the historical series was observed.

Figure 2 shows the percentage distribution of agreements entered into between consortia and the Federal Government by public policy area. Of the 384 agreements signed between 1996 and 2016, most of them, 31.77% (n = 122) aimed to promote actions in the health sector. Noteworthy is the very diverse set of areas in which consortia establish agreements with the Federal Government, although these instruments are concentrated in health and rural development.

Regarding the prominence of the health area among the agreements signed, Machado and
Figure 1. Development of the number of agreements between the Federal Government and inter-municipal consortia in Brazil, 1996-2016.


Andrade and Rocha point out that the provision of health services has become, over the last decades, a municipal competence and, thus, the sensitivity of the electorate for the quality of services rendered is quite high. Authors argue that this fact makes mayors of a given region overcome their partisan conflicts and seek alternatives to solve the demands. Thus, consortia would be a tool to ensure access to health services.

Figure 3 shows the number of health care agreements by the federal state. Most of the agreements were signed by consortia located in states of the South and Southeast. The Northeastern Region signed only one agreement in the health area, and the Northern Region signed four agreements throughout this historical series.

According to the IBGE, in 2015, 2,672 Brazilian municipalities (48% of the total) were participating in some health consortium. Concerning the number of municipalities in the consortium by region, an uneven distribution of these institutional arrangements was identified in the Brazilian territory. The Southern and Southeastern regions have 80% and 66.48% of their municipalities with a consortium, respectively. In these regions, the states of Paraná and Minas Gerais stood out for both having 92% of their entities with consortia. As for the other regions, the Midwest showed 37.47% of the consortium municipalities, the North 11.77%, and the Northeast 27.31%. However, the IBGE does not count the number of existing consortia, and no other official information regarding this data was found. The study by Teixeira found, from an analysis based on the MHDI-Income, that the consortium municipalities of the country have a higher mean income than the non-consortium. Also, the study showed that health consortiation had spread unevenly across regions, as per criteria that are still hardly understood. Within this scope, this study found that the signing of health agreements involving consortia and the Federal Government varies by state and region of the country and is heterogeneous.

The agreement between the Federal Government and the consortium is a voluntary transfer of resources, which necessarily implies the existence of political negotiation between these institutional schemes and the spheres of the central government. As shown in Figure 3, the consortia of the states of the Southern and Southeastern Regions hold a prominent position in the signing of agreements with the Federal Government, while those of other regions also evidence a discrete performance. Concerning the explanation of this phenomenon, we can hypothesize that it depends on the institutional structure and the articulation capacity of these organizations with the Federal Government. As pointed out by Abrúcio et al., the ability to build an institutional structure that regulates and guarantees the development of actions is crucial for the maintenance of consortium activities. A study by Meireles on the logic of voluntary Federal Government transfers to municipalities supports this thesis insofar as the author points out that...
elements such as political pressure, political parties, and bargaining are crucial in the process of obtaining voluntary Federal Government’s resources, which is the category of agreements with consortia.

It is noteworthy that the consortia of the state of Paraná signed 41% (n = 50) of all health care agreements in the period analyzed. The studies by Rocha23 and Ferraes and Cordoni Júnior20 show that some consortia in Paraná aim to purchase medicines, while others are geared to the management of the Emergency Medical Assistance Service (SAMU). Also, studies show that most of these consortia aim to organize the demands for medium- and high-complexity services in their operating regions. The authors
state that there are cases in which a municipality participates in more than one consortium, and some consortia encompass municipalities from other states of the federation, such as Santa Catarina. That is, the rationale of establishing these institutional schemes is permeated by conflicts and partnerships formalized by the mayors that underpin these structures, which may even extrapolate the state territory. Thus, we can identify that the process of establishing and operating consortia does not necessarily follow the institutional design of the Health Regions provided for by the State Health Secretariat of Paraná. Finally, it points out that, despite these issues, the Paraná consortia were skilled and thriving in the process of obtaining funds from the federal government.

Figure 4 shows the time-related distribution of health-related agreements between consortia and the Federal Government. An increase in the signing of agreements was noted, albeit not linearly and with considerable variation in the period 1996-2016. Linhares et al. state that the Consortium Law, enacted in 2005, produced a significant increase in the number of consortium municipalities in Brazil. However, the consortia had a heterogeneous performance in the search for funding for their actions, materialized in the signing of agreements with the Federal Government throughout the historical series.

The content of the agreements entered into by the inter-municipal public consortia with the Federal Government

This section analyzes the objectives of health-related covenants. Thus, the types of actions that the consortia intended to perform were classified, as shown in Figure 5.

In total, 66% of the agreements signed (n = 81) in this area aimed at the acquisition of hospital equipment, improved physical structure of health services and purchase of permanent materials. Also, it is noteworthy that 7% (n = 9) of the agreements signed aimed at building physical structures where health services would function, and another 7% sought to acquire mobile units for the consortium municipalities.

Some consortia organize their own public policy implementation structures, that is, they build and maintain health services that aim to provide direct care to people. On the other hand, other consortia act to assist the municipalities in the maintenance of health services (for example, purchase of permanent materials for hospitals), thus becoming a technical, operational and administrative support structure, without pretending to provide direct care services to the population.

The objectives of the agreements presented by the consortia to the Federal Government reveal a set of deficiencies of the municipalities in their regions, for which the resources would be allocated. References to the concept of health regionalization were identified from the analysis of the documents that underpin the agreements signed. For illustrative purposes, we mention the agreement signed in 2010 by a consortium located in the southern state of Paraná, which has 20 consortium municipalities. Relevant documents show that the consortium was seeking the construction of a building where a regional center for medical specialties would operate, and the justification for fundraising, described in the purpose of the agreement, was precisely to reduce the lines of health services located in the capital, Curitiba, and the creation of a regional reference center to regionalize the care of medium-complexity services.

On the other hand, some agreements showed, in the description of the objective, an argument about the importance of investment for the region. The following is an excerpt from an agreement established by a Minas Gerais consortium in 2012, with the following justification:

The purpose of the execution of the object of the agreement is to purchase equipment to create conditions to implement health services to serve the region of the consortium municipalities, whose benefit is to create conditions for the local people to be served in their region, avoiding their travel to the great saturated centers.

Thus, the document shows the consortium’s sensitivity to crucial issues related to supply management to meet demand in the Unified Health System.

In another case, noteworthy is an agreement signed by a consortium located in Rondônia, in 2011, which aimed to raise federal funds for the procurement of specific hospital equipment (radiography and mammography). Also, the objectives of the agreement state that the reference municipality of the region would administer such equipment, and not the consortium. Thus, the consortium would be associated with the interests of the municipalities of that territory and would facilitate access to federal resources, but not the service provider. In other cases, the objectives of the identified agreements referred to the procurement of vehicles such as ambulances and mobile ICUs to equip existing health servi-
**Figure 4.** Evolution in the number of agreements between health consortia and the Federal Government, by year, Brazil, 1996-2016.


**Figure 5.** Objective of agreements established between health consortia and the Federal Government, by type, Brazil, 1996-2016.

ces in the reference municipalities. However, the concept of health service of most consortia is linked to a model focused on curative and hospital-centered medicine, based on the production of medium- and high-complexity care. Contrary to this trend, a negligible number of the agreements (6 in all) proposed the construction of senior citizen gyms to improve the quality of life of the older adults.

We identified that the consortium managers are aware of the adverse effects of health care decentralization on Brazilian municipalities. Because of this, these organizations propose actions for regionalization of health care as they present proposals to build regional structures for the provision of health services and to guarantee financial support to the reference municipalities of the regions. However, challenges persist. It is noteworthy that it is unclear whether and how such initiatives converge with the work of the Regional Interagency Commissions and the Integrated Agreed Programming guidelines located within each state of the federation. Also, health consortia do not have participation instruments, hindering social control over their activities.

The study by Botti et al. draws attention to the fact that consortia are more concerned with the direct provision of services than with the construction of a health system that seeks comprehensive and coordinated care. In this context, the authors state that consortia manage to increase access to specialized services in the regions they operate; however, challenges persist regarding the construction of a referral and counter-referral system between health services. The study by Nicoletto et al., conducted in a state of southern Brazil, points out that the provision of specialized visits by consortia is insufficient to meet the demand, and several flaws are found in their referral and counter-referral mechanisms. In the same vein, the authors emphasize that consortia have the potential to expand the supply of services; however, these actions must be planned and adapted to the referral system stipulated by the Unified Health System.

Therefore, from this analysis, we turn to the problem raised by Grin and Abrúcio and Segatto and Abrúcio concerning the construction of a coordinated and cooperative system of public policy production in Brazil. International studies on the topic conducted in countries such as Spain, Germany, and Canada also highlight the importance of building intergovernmental cooperation and coordination systems that seek to reconcile local demands with policies developed by central governments to ensure universal access to health.

It is also worth mentioning some limitations of this study, such as the fact that the research is based on the agreements signed by the inter-municipal consortia with the Federal Government, without considering the agreements signed by the state governments. The analysis was limited to the objectives contained in the official documents presented for the establishment of the agreement, disregarding the effective implementation of the claimed resources, which would require on-site research.

Conclusion

This study sought to provide a general description of the health care agreements between the inter-municipal public consortia and the Federal Government, showing that the time evolution of these agreements varied greatly over time and that the municipalities of the South and Southeast had a higher number of covenants compared to other regions.

Concerning the content of the agreements, it was found that the consortia are aware of the issues that involve the decentralization of health policies and appropriate the concept of health regionalization to request resources from the Ministry of Health. However, data analysis suggests that consortia still act autonomously and disconnected from other management instances, such as the Regional Health Coordination Offices, which can lead to mismatches and overlapping activities. Moreover, it is noteworthy that consortia lack mechanisms that encourage participation and social control, inherent and fundamental aspects for the consolidation of the SUS. Finally, we stress the need for further studies on the subject, especially emphasizing the way public consortia relate to other spheres of health management and social control, as well as other spheres of government.
Collaborations

L. Lui and LM. Schabbach participated in data collection and analysis. CR. Dalla Nora contributed to the review and analysis of the data. The research makes up L. Lui’s doctoral research on the performance of intermunicipal health consortia.

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